



DETERMINATION REPORT FINAUTO LTD.

DETERMINATION OF THE SMALL HYDROPOWER STATION SHPS "POTOCHNITSA"

REPORT NO. BULGARIA-VAL/0001/2007

REVISION No. 00

BUREAU VERITAS CERTIFICATION

DETERMINATION REPORT

Date of first issue: 18/01/2008	Organizational unit: Bureau Veritas Certification Holding SAS
Client: Finauto LTD.	Client ref.: Mr. Genadi Tabakov

Summary:

Bureau Veritas Certification has made the determination of the Small Hydropower Station SHPS "Potochnitsa", Bulgaria on the basis of UNFCCC criteria for the JI, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions by the JI Supervisory Committee, as well as the host country criteria.

The determination scope is defined as an independent and objective review of the project design document, the project's baseline study, monitoring plan and other relevant documents, and consisted of the following three phases: i) desk review of the project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final determination report and opinion. The overall determination, from Contract Review to Determination Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

The first output of the determination process is a list of Clarification and Corrective Actions Requests (CL and CAR), presented in Appendix A. Taking into account this output, the project proponent revised its project design document.

In summary, it is Bureau Veritas Certification's opinion that the project correctly applies the Guidance on Criteria for Baseline Setting and Monitoring and meets the relevant UNFCCC requirements for the JI and the relevant host country criteria, pending the approval from involved parties.

Report No.: BULGARIA-val/0001/2007	Subject Group: JI	
Project title: Small Hydropower Station SHPS "Potochnitsa"		
Work carried out by: Flavio Gomes – lead verifier Andrey Yordanov – verifier Vilian Vagliarov – financial specialist		
Work verified by: Ashok Mammen		
Date of this revision: 18/01/2008	Rev. No.: 00	Number of pages:

Indexing terms

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Abbreviations change / add to the list as necessary

CAR	Corrective Action Request
CL	Clarification Request
CO ₂	Carbon Dioxide
DR	Document Review
EIA	Environmental Impact Assessment
EIR	Environmental Impact Assessment Report
EPS	Electric Power System
ERU	Emission Reduction Unit
GHG	Green House Gas(es)
JI	Joint Implementation
JISC	Joint Implementation Supervisory Committee
I	Interview
IE	Independent Entity
IETA	International Emissions Trading Association
MoV	Means of Verification
PCF	Prototype Carbon Fund
PDD	Project Design Document
PP	Project Participant
UNFCCC	United Nations Framework Convention for Climate Change



Table of Contents		Page
1	INTRODUCTION	5
1.1	Objective	5
1.2	Scope	5
1.3	GHG Project Description	5
1.4	Determination team	5
2	METHODOLOGY.....	6
2.1	Review of Documents	8
2.2	Follow-up Interviews	8
2.3	Resolution of Clarification and Corrective Action Requests	9
3	DETERMINATION FINDINGS	9
3.1	Project Design	9
3.2	Baseline and Additionality	10
3.3	Monitoring Plan	11
3.4	Calculation of GHG Emissions	11
3.5	Sustainable Development Impacts	12
3.6	Comments by Local Stakeholders	12
4	COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS.....	13
5	DETERMINATION OPINION	13
6	REFERENCES	14

Appendix A: Determination Protocol

Appendix B: Verifiers CV's



1 INTRODUCTION

Finauto LTD. has commissioned Bureau Veritas Certification to determine its JI project Small Hydropower Station SHPS “Potochnitsa”, Bulgaria.

This report summarizes the findings of the determination of the project, performed on the basis of UNFCCC criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

1.1 Objective

The determination serves as project design verification and is a requirement of all projects. The determination is an independent third party assessment of the project design. In particular, the project's baseline, the monitoring plan, and the project's compliance with relevant UNFCCC and host country criteria are determined in order to confirm that the project design, as documented, is sound and reasonable, and meets the stated requirements and identified criteria. Determination is a requirement for all JI projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of emission reduction units (ERUs).

UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions by the JI Supervisory Committee, as well as the host country criteria.

1.2 Scope

The determination scope is defined as an independent and objective review of the project design document, the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations.

The determination is not meant to provide any consulting towards the Client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project design.

1.3 GHG Project Description

The proposed project for a Small Hydro-power station SHPS “Potochnitsa” is implemented by the company Finauto LTD..

The Project contemplates the construction of a small run-of-the-river power station. Due to its proximity to Stouden Kladenets Dam, about 3,5km, it will operate in a mode subordinate to hydro power station Stouden Kladenets built on the dam. “Potochnitsa” will operate in compliance with the dispatch schedule of the Electric Power System (EPS) dam discharge and processing of waters passing through it for generation of electric power.

1.4 Determination team

The determination team consists of the following personnel:



Flavio Gomes
Bureau Veritas Certification Team Leader, Climate Change Verifier

Andrey Yordanov
Bureau Veritas Certification Climate Change Verifier

Ashok Mammen
Bureau Veritas Certification, Internal Reviewer

Vilian Vagliarov
Bureau Veritas Certification Financial Specialist

2 METHODOLOGY

The overall determination, from Contract Review to Determination Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

In order to ensure transparency, a determination protocol was customized for the project, according to the Determination and Verification Manual (IETA/PCF). The protocol shows, in a transparent manner, criteria (requirements), means of verification and the results from determining the identified criteria. The determination protocol serves the following purposes:

- It organizes, details and clarifies the requirements a JI project is expected to meet;
- It ensures a transparent determination process where the determinator will document how a particular requirement has been determined and the result of the determination.

The determination protocol consists of five tables. The different columns in these tables are described in Figure 1.

The completed determination protocol is enclosed in Appendix A to this report.



DETERMINATION REPORT

Determination Protocol Table 1: Mandatory Requirements			
Requirement	Reference	Conclusion	Cross reference
The requirements the project must meet.	Gives reference to the legislation or agreement where the requirement is found.	This is either acceptable based on evidence provided (OK), a Corrective Action Request (CAR) or a Clarification Request (CL) of risk or non-compliance with stated requirements. The CAR's and CL's are numbered and presented to the client in the Determination Report.	Used to refer to the relevant protocol questions in Tables 2, 3 and 4 to show how the specific requirement is determined. This is to ensure a transparent determination process.

Determination Protocol Table 2: Requirements checklist				
Checklist Question	Reference	Means of verification (MoV)	Comment	Draft and/or Final Conclusion
The various requirements in Table 1 are linked to checklist questions the project should meet. The checklist is organized in several sections. Each section is then further subdivided. The lowest level constitutes a checklist question.	Gives reference to documents where the answer to the checklist question or item is found.	Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.	This is either acceptable based on evidence provided (OK), or a Corrective Action Request (CAR) due to non-compliance with the checklist question. (See below). Clarification Request (CL) is used when the determination team has identified a need for further clarification.

Determination Protocol Table 3: Baseline and Monitoring Methodologies				
Checklist Question	Reference	Means of verification (MoV)	Comment	Draft and/or Final Conclusion
The various requirements of baseline and monitoring methodologies should be met. The checklist is organized in several sections. Each section is then further subdivided. The lowest level constitutes a checklist question.	Gives reference to documents where the answer to the checklist question or item is found.	Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.	This is either acceptable based on evidence provided (OK), or a Corrective Action Request (CAR) due to non-compliance with the checklist question. (See below). Clarification Request (CL) is used when the determination team has identified a need for further clarification.



DETERMINATION REPORT

Determination Protocol Table 4: Legal requirements				
Checklist Question	Reference	Means of verification (MoV)	Comment	Draft and/or Final Conclusion
The national legal requirements the project must meet.	Gives reference to documents where the answer to the checklist question or item is found.	Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.	This is either acceptable based on evidence provided (OK), or a Corrective Action Request (CAR) due to non-compliance with the checklist question. (See below). Clarification Request (CL) is used when the determination team has identified a need for further clarification.

Determination Protocol Table 5: Resolution of Corrective Action and Clarification Requests			
Report clarifications and corrective action requests	Ref. to checklist question in tables 2/3	Summary of project owner response	Determination conclusion
If the conclusions from the Determination are either a Corrective Action Request or a Clarification Request, these should be listed in this section.	Reference to the checklist question number in Tables 2, 3 and 4 where the Corrective Action Request or Clarification Request is explained.	The responses given by the Client or other project participants during the communications with the determination team should be summarized in this section.	This section should summarize the determination team's responses and final conclusions. The conclusions should also be included in Tables 2, 3 and 4, under "Final Conclusion".

Figure 1 Determination protocol tables

2.1 Review of Documents

The Project Design Document (PDD) submitted by Finauto LTD. and additional background documents related to the project design and baseline, i.e. country Law, Guidelines for Completing the Project Design Document (JI-PDD), Approved methodology, Kyoto Protocol, Clarifications on Determination Requirements to be Checked by an Independent Entity were reviewed.

To address Bureau Veritas Certification corrective action and clarification requests Finauto LTD. revised the PDD and resubmitted it on 02/2008.

The determination findings presented in this report relate to the project as described in the PDD version 06.

2.2 Follow-up Interviews

On 02/03/2007 Bureau Veritas Certification performed interviews with project stakeholders to confirm selected information and to resolve issues identified in the



document review. Representatives of Finauto LTD. were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
Finauto LTD.	➤ additionality of the project, emission factor of the project, EIA and its approval.

2.3 Resolution of Clarification and Corrective Action Requests

The objective of this phase of the determination is to raise the requests for corrective actions and clarification and any other outstanding issues that needed to be clarified for Bureau Veritas Certification positive conclusion on the project design.

To guarantee the transparency of the determination process, the concerns raised are documented in more detail in the determination protocol in Appendix A.

3 DETERMINATION FINDINGS

In the following sections, the findings of the determination are stated. The determination findings for each determination subject are presented as follows:

- 1) The findings from the desk review of the original project design documents and the findings from interviews during the follow up visit are summarized. A more detailed record of these findings can be found in the Determination Protocol in Appendix A.
- 2) Where Bureau Veritas Certification had identified issues that needed clarification or that represented a risk to the fulfillment of the project objectives, a Clarification or Corrective Action Request, respectively, have been issued. The Clarification and Corrective Action Requests are stated, where applicable, in the following sections and are further documented in the Determination Protocol in Appendix A. The determination of the Project resulted in 10 Corrective Action Requests and 14 Clarification Requests.
- 3) The conclusions for determination subject are presented.

3.1 Project Design

Bureau Veritas Certification recognizes that Finauto LTD. Project is helping country fulfill its goals of promoting sustainable development. The project is expected to be in line with host-country specific JI requirements because it supplies electricity from the construction of a hydro power source.

The Project Scenario is considered additional in comparison to the baseline scenario, and therefore eligible to receive Emissions Reductions Units (ERUs) under the JI, based on an analysis, presented by the PDD, of investment, technological and other barriers, and prevailing practice.



The project design is sound and the geographical (EPS) and temporal (3 years and 9 months) boundaries of the project are clearly defined.

Below, a transcription of the outstanding issues related to project design.

CAR 2. There is no evidence of written project approvals by the Parties involved.

PP's response: FINAUTO submits PIN and all required supplemental legal documents to Bulgarian MoEW for Expression of Interest to generate Emission Reductions Units of SHPS "Potochnitsa". MoEW's endorsement was issued for developing SHPP Potochnitsa as JI project.

Danish Carbon (DC) signed with FINAUTO a Letter of Intent to buy ERU's generated by JI project SHHP "Potochnitsa".

Conclusion: This CAR will be closed after the issuance of the LoA by the MoEW's, Danish NFP.

3.2 Baseline and Additionality

The approved CDM baseline methodology for small-scale project activities AMS-I.D./Version 12, 07 October 2007: "Grid connected renewable electricity generation" can be used for this project.

The grounds for applicability of the AMS-I.D. methodology to this small-scale JI project activity are as follows:

- The Project is of a hydropower type, one of the several renewable energy sources project types where the use of that methodology is allowed;
- The total installed capacity of "Potochnitsa" is 9,38 MW which is within the permissible limits 15MW of the chosen methodology for small-scale project activities;
- The methodology is applicable to renewable energy sources projects that will deliver electric power to the country's power transmission network;
- The design energy density calculated by dividing the installed power generation capacity by the pond volume area of the Project is equivalent to 176,98 W/m². That energy density is much higher than 10MW/m² which, according to the requirements of the CDM Executive Board, is the minimum value above which that of the Project should be. Therefore, the use of the approved methodology (AMS-I.D) is possible and the design emissions from the pond volume may be neglected since they are insignificant and slightly low.

The additionality of the proposed project is demonstrated and assessed by "Tool for the demonstration and assessment of additionality" (version 04).

Below, a transcription of the outstanding issues related to baseline and additionality.



CAR 4. There is no evidence of an investment analysis of the project, taking into account factors such as internal rate of return with and without CERs, price of electricity sold to the grid, etc.

PP's response: Revised financial analysis is enclosed as Annex 3 of PDD.

Conclusion: After a lot of interactions with the PP, PDD version 6.0 was checked, these insertions were evaluated by the determination team and this CAR is closed.

CAR 5. There are no evidences of clear definitions of the project boundary.

PP's response: Item B.3 of PDD was revised.

Conclusion: PDD version 5.0 was checked, these definitions were inserted in item B.3, and this CAR is closed.

3.3 Monitoring Plan

The Project uses the CDM baseline methodology for small-scale project activities AMS-I.D./Version 12, 07 October 2007: "Grid connected renewable electricity generation". Refer to discussions on the validity of the methodology at section 3.2 above.

Below, a transcription of the outstanding issues related to monitoring plan.

CAR 9. There are no evidences of definition of measurement methods and procedures, measurement equipment, calibration procedures applied, and accuracy of the measurement methods.

PP's response: Measurements methods, their accuracy and procedures, the type of electric meters and applied calibration procedures are according to "Bulgarian Electricity Metering Rules" published by State Energy and Water Regulatory Commission.

Conclusion: PDD version 5.0 was checked, this definition was inserted in item D.3, and this CAR is closed.

3.4 Calculation of GHG Emissions

Citation of Item 10 wording of Methodology AMS I.D is as follows:

" In the case of project activities that involve the addition of renewable energy generation units at an existing renewable power generation facility, where the existing and new units share the use of common and limited renewable resources (e.g. stream-flow, reservoir capacity, biomass residues), the potential for the project activity to reduce the amount of renewable resource available to, and thus electricity generation by, existing units must be considered in the determination of baseline emissions, project emissions, and/or leakage, as relevant"



SHPS Potochnitsa is completely new JI project, therefore the above mentioned item 10 in the methodology is considered not relevant, by the reason of non-existing power units in the project boundary. Hence, methodology ACM0002 must be used to calculate the baseline emissions

According to the Approved consolidated baseline methodology ACM0002 (ver.6) the baseline emissions are calculated as:

$$EM\ BL = EF * E_{net}$$

where EF - emission factor, tCO₂/MWh.;

E_{net} - net electricity delivered to the EPS (electricity exported – electricity imported), on a yearly basis, MWh/year.

The emissions resulted from the transport/construction of the equipment are not considered as being part of the project for three reasons:

1. they are not completely under the control of the project owner
2. difficulties related to monitoring them
3. we should have also considered the emissions related to the transport/construction of the power plants in the Bulgarian National Power Grid (as the project replaces electricity in the Grid)

3.5 Sustainable Development Impacts

On the grounds of Art.93, Paragraph 5 of the Environmental Protection Act, the Information Required for Estimation of the Need for EIA was presented to the Haskovo Regional Inspectorate of Environment and Water.

That information is in substance a preliminary environmental assessment and presents written documents prepared by the PP in conformity with Appendix No.2 to Art.6 of the Regulation on the Conditions and Procedure of EIA of Investment Proposals for Construction, Activities and Technologies.

3.6 Comments by Local Stakeholders

Notification of local stakeholders and feedback of their opinions and recommendations for the project were carried out in conformity with the legislation regulating environmental protection. The procedures of notification and assessment of the need for EIA are described in Chapter Two of the Regulation on the Conditions and Procedure of EIA of Investment Proposals for Construction, Activities and Technologies adopted by Council of Ministers Ordinance No.59 / 07.03.2003.

In accordance with these procedures, by its letter of January 2005 Finauto informed Haskovo Regional Inspectorate of Environment and Water on whose territory "Potochnitsa" will be located, of its project investment proposal. Simultaneously with



notification of the competent authority, the PP informed, by letter Incoming Ref. No.53-00-81, dated 18.03.2005 to the mayors of the municipalities concerned – Stambolovo and Krumovgrad, and to the mayors' offices in the villages of Dolno Cherkovishte, Rabovo (within Stambolovo Municipality) and Oreshari, Moryantsi and Potochnitsa (within Krumovgrad Municipality) of Finauto investment intent to build the run-of-the-river SHPS Potochnitsa. In that letter, in accordance with the abovementioned Regulation, written positions were requested from the municipalities and villages concerned with the Project implementation.

With its Letter Ref. No. 73/13.03.2005 to the Director of Haskovo Regional Inspectorate of Environment and Water, the PP presented the Information Required for Estimation of the Need for Project EIA.

On the grounds of Art.4 Paragraph 2 of the Regulation, Finauto informed the residents of Stambolovo and Krumovgrad Municipalities of its intention to implement the Project by an announcement in the local newspapers "NOVINAR YUG" and "New Life" published in the towns of Kirdzhali and Haskovo and distributed all over Haskovo District.

All positions, opinions and recommendations concerning the Project were sent to the competent authority, in this case – Haskovo Regional Inspectorate of Environment and Water, to be taken into account in the Decision on the need for EIA and, in that manner, the prerequisites were established for either obtaining a permit for further development of the project or its rejection due to inadequate environmental conformity.

Preliminary discussions of Public Meetings program with local communities have been held.

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

According to the modalities for the Determination of JI projects, the IE shall make publicly available the project design document and receive, within 30 days, comments from Parties, stakeholders and UNFCCC accredited non-governmental organizations and make them publicly available.

Bureau Veritas Certification published the project documents on the UNFCCC JI website (<http://JI.unfccc.int>) on 15/12/2006 and invited comments within 13/01/2007 by Parties, stakeholders and non-governmental organizations.

There are no comments from stakeholders.

5 DETERMINATION OPINION

Bureau Veritas Certification has performed a determination of the Small Hydropower Station SHPS "Potochnitsa" project in Bulgaria. The determination was performed on the basis of UNFCCC criteria and host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.



The determination consisted of the following three phases: i) a desk review of the project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) the resolution of outstanding issues and the issuance of the final determination report and opinion.

Project participant/s used the latest tool for demonstration of the additionality. In line with this tool, the PDD provides sufficient evidences to demonstrate that the project is additional.

By installing hydro turbines to produce electricity, the project is likely to result in reductions of GHG emissions partially. An analysis of the investment and technological barriers demonstrates that the proposed project activity is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. Given that the project is implemented and maintained as designed, the project is likely to achieve the estimated amount of emission reductions.

The review of the project design documentation (version 6) and the subsequent follow-up interviews have provided Bureau Veritas Certification with sufficient evidence to determine the fulfillment of stated criteria. In our opinion, the project correctly applies and meets the relevant UNFCCC requirements for the JI and the relevant host country criteria, pending approval from the involved parties.

The determination is based on the information made available to us and the engagement conditions detailed in this report.

6 REFERENCES

Category 1 Documents:

Documents provided by Type the name of the company that relates directly to the GHG components of the project.

- /1/ PDD version 01, dated 01/11/2006
- /2/ PDD version 05, dated 29/11/2007
- /3/ PDD version 06, dated 06/02/2008
- /4/ Baseline Study, dated 26/11/2006
- /5/ Financial Calculations, dated 27/09/2007

Category 2 Documents:

Background documents related to the design and/or methodologies employed in the design or other reference documents.

- /1/ Kyoto Protocol to the United Nations Framework Convention on Climate Change, United Nations, 1997
- /2/ Guidelines for Users of the Joint Implementation Project Design Document Form, version 02
- /3/ AMS-I.D - Grid connected renewable electricity generation, version 12
- /4/ ACM0002 – Consolidate Methodology for Grid-connected Electricity Generation



from Renewable Sources, version 06

/5/ Tool for the demonstration and assessment of additionality

/6/ Water Permit

Persons interviewed:

List persons interviewed during the determination or persons that contributed with other information that are not included in the documents listed above.

/1/ Genadi Tabakov - Finauto

/2/ Christo Schwabski - Econia

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APPENDIX A: COMPANY JI PROJECT DETERMINATION PROTOCOL

paste the determination protocol tables duly completed

